

# The Development of the Quality Management Processes for the Building and Environment of the Basic Education Schools

Suppara Charoenpoom

**Abstract**—The objectives of this research was to design and develop a quality management of the school buildings and environment. A quantitative and qualitative mixed research methodology was used. The population sample included 14 directors of primary schools. Two research tools were used. The first research tool included an in-depth interview and questionnaire. The second research tool included the Quality Business Process and Quality Work Procedure, and a Key Performance Indicator of each activity. The statistics included mean and standard deviation.

The findings for the development of a quality management process of buildings and environment administration of the basic schools consisted of one quality business process (QBP) and seven quality work processes (QWP). The result from the experts' evaluation revealed that the process and implementation of quality management of the school buildings and environment has passed the inspection process with consensus. This implies that the process of quality management of the school buildings and environment is suitable for implementation. Moreover, the level of agreement in the feasibility of the implementation of this plan had the mean in the range of 0.64-1.00 which suggests the design of the new plan is acceptable.

**Keywords**—Process, Building, Environment.

## I. INTRODUCTION

EDUCATION is an important tool to develop knowledge, cognitive, behavior, attitude, value, and integrity of a human being; these attributes are considered a vital resource for the changing world and society. Education management plays an important role since most education activities originate at school. Therefore, it is imperative to develop quality education institutions which are cohesive, and support learning management. This should result in enhancing the quality of learners as well as the level of national competitiveness. A high quality of human resources is an important factor for any nation [1]. Hence, education is vital process in development this human resource. To be able to develop a required quality of human resources, it is necessary to have integration of processes which include the management process, learning process, along with the building and environment administration process. This integration is to create a learning environment with interaction between learners and the environment in terms of physical, mental, social, and culture; and these interactions may result in positive behavior transformations of the learners.

Dr. Suppara Charoenpoom is lecturer at College of Innovation and Management, Suan Sunandha Rajabhat University, Bangkok, Thailand (Tel.: + 6621601187- 8; Fax: + 6621601184; e-mail: suppara.ch@ssru.ac.th).

The building and environment administration has a direct effect on the management of learning and the learning environment which, in turn, have an effect on the learning process, and ultimately on the development of the body, mind, intellection, emotion, and social abilities of the learners. The study of Ederman [2] found that the classroom environment had a relationship to the brain process. Moreover, Rouk [3] found that students in a poor school environment often had a poor ability to concentrate and poor grades. These findings also concurred with the findings of Russell [4] which stated that the classroom environment had a direct relationship with the students' grades and it was a major factor that can be worked on to improve the students' grades. In addition, Stewart [5] found that the school environment had a direct effect to number of absences, self-understand, retire rate, and students' achievement.

In the past, the Thai education management and the quality of Thai education had accumulated problems. The exigency to solve these problems resulted in the National Education Act of 1999 as well as the Amending Act of 2002 which forced all education institutes to make a big adjustment with their view of education to create a higher standard of quality. The introduction of Deming Cycle and Total Quality Management or TQM to the education management was aimed to achieve an excellent quality of students. The researcher is interested in designing and developing quality buildings and environment management in order to do this, the research findings will be used a guideline to manage the building and environment of the education institutions effectively and to be able to raise the education institutions to a higher level of quality.

## II. METHODOLOGY

In order to design and develop quality management of building and environment processes, the researcher applied the framework of system management, total quality management, Deming cycle, process quality management, criteria for Thailand Quality Award in Section 4, and the concept of building and environment management. Both qualitative and quantitative research methods were utilized. The population of this research included 83 managers from education institutions in the area of Samut Songkhram province. The sample group included 14 directors of primary schools in district 10, Samut Songkhram province. Direct interview was utilized to gather data. Fig. 1 shows the five steps of this research.

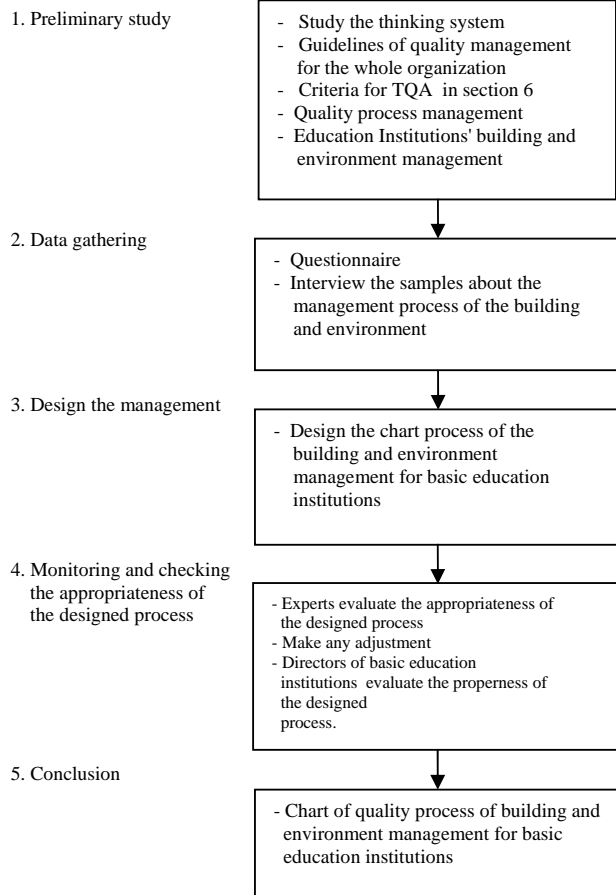


Fig. 1 Five steps of research

The data collection was done by interviewing with samples who were the directors of basic education institutions who agreed to participate with this study. There were five steps of data collection.

1. Collect data from questioners from the working process and design charts for the process of building and environment management
2. Monitoring and checking the appropriateness of the charts for the process of building and environment management by three experts in the field. The decisions would be reached with only a unanimous agreement.
3. Adjustments and corrections made from the evaluations in step two.
4. Checking the feasibility to implement the process based on directors' opinions of average mean available.
5. Make any adjustments from step 4.

The data analysis was performed in order to design the process of the building and environment management. There were two steps of data analysis: the first step was a quantitative data analysis which analyzes the feasibility of the processes by using the mean average of criteria and the index of concordance (IOC) [6]. Second step was a qualitative data analysis which analyzed the data from in-depth interviews by using the technique of Supank Chantavanich [7].

### III. FINDINGS

The results of the processes designed for the building and environment management is shown in Fig. 2.

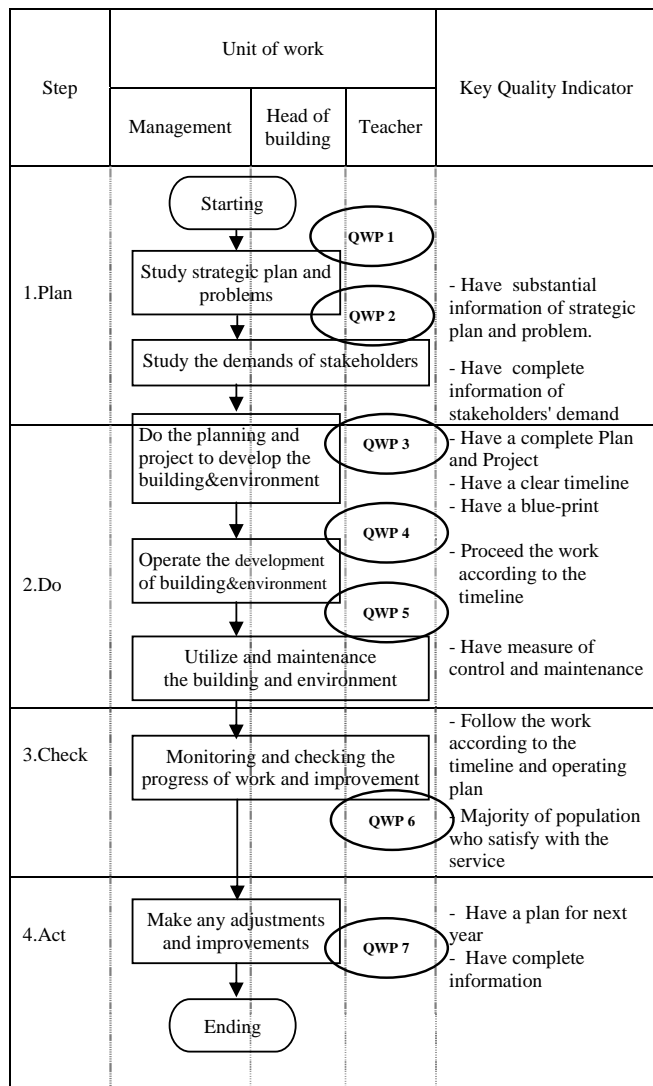


Fig. 2 Chart of the process for the building and environment quality management

From Fig. 2, the chart of the processes to quality management of building and environment management (QBP) consisted of seven processes (QWP) as follows:

1. The process to study the strategic plan and problems
2. The process to study the demand of stakeholders
3. The process to do plan and develop a project to improve the building and environment
4. The process to operate the development of the building and environment
5. The process to utilize and maintain the building and environment
6. The process to follow up and evaluating the progress
7. The process to make any adjustment

#### IV. CONCLUSION AND SUGGESTIONS

From the applied concept of quality management for the whole organization, the quality process management, criteria for Thailand Quality Award in section 6, and guideline to manage the building and environment to design the process of building and environment management for basic education institutions, it was found that the process to manage included seven important processes. The process includes a way to make any adjustment to get the outcome according to the objective and highest effectiveness. This process is aimed to serve the needs and wants of the stakeholders which concurred with the management idea of Verapot Luprasitkul [8] who stated that the design of the model to improve work and implement it, requires review with creative adjustments to improve each step and to enhance the quality of work. This is to make the development process to a continuous improvement process.

Nowadays, the working system of each school must be evaluated by experts outside the school. Therefore, those who use the finding of this research should apply the system of management and focus on the quality for the whole organization. Make sure that each unit in the organization understands the concept of quality management for the whole organization, the quality process management, criteria for Thailand Quality Award in section 6, and guideline to manage the building and environment. This will help to get the results as planned. Moreover, the measurement of quality index should be involved by the management and other people in the process. The more people participate in the process of brainstorming, the more accurate of the measurement of key quality indicator will be.

#### ACKNOWLEDGMENT

This research is funded by Suan Sunandha Rajabhat University, Bangkok, Thailand.

#### REFERENCES

- [1] National Education Committee, "The Strategy for Developing in the Competition of the Country," Bangkok, 2001.
- [2] Edelman, G.M. Bright Air, Brilliant Fire, "On the Matter of the Mind," New York, 1992.
- [3] Rouk, U., "Different Way of Knowing: Effects of Elementary Teaching and Learning in Kentucky," Washington DC, 1997.
- [4] Russell, T, "Why Doesn't Teacher Education Begin with Experience?," 1998.
- [5] Stewart, E.B., "School Structural Characteristics, Student Effort, Peer Associations, and Parental Involvement: The Influence of School and Individual Level Factors on Academic Achievement," 2008.
- [6] Suwimon Trirakanon, "Building Measuring Instrument the Variable in Social Science Research:The Trend to the Practice," Bangkok,2008.
- [7] Supank Chantavanich, "Qualitative Research,"Bangkok, 2006.
- [8] Verapot Luprasitkul, "TQM Living Handbook 6," Bangkok, 2000.